



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|-----------------------------|------------------------|
| 10/692,264 | 10/23/2003 | Jon Cargille | MS1-1815US | 1567 |
| 22801 | 7590 | 11/15/2007 | | |
| LEE & HAYES PLLC 421 W RIVERSIDE AVENUE SUITE 500 SPOKANE, WA 99201 | | | EXAMINER ANYA, CHARLES E | |
| | | | ART UNIT 2194 | PAPER NUMBER |
| | | | MAIL DATE 11/15/2007 | DELIVERY MODE PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/692,264

Applicant(s)

CARGILLE ET AL.

Examiner

Charles E. Anya

Art Unit

2194

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3/MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 September 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.


WILLIAM THOMSON
SUPERVISORY PATENT EXAMINER

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 6/5/07.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

1. Claims 1-74 are pending in this application.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. **Claims 1-3,5-12,14,15,18,21-25 and 27-40 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Pat. No. 6,157,927 to Schaefer et al.**

3. As to claim 1, Schaefer teaches interfaces, stored on one or more computer-readable media, to be called on kernel transaction management objects, comprising: application program interfaces (APIs) to implement operations on a kernel transaction object (TX) (figure 4D "...ITransaction interface..." Col. 15 Ln. 15 – 33), at least one TX representing a transaction and being accessible to at least one process participating in the transaction (Transaction Object 78); and APIs to implement operations on a kernel resource management object (RMO) (figure 4E "...IResourceManager interface..." Col. 15 Ln. 51 – 62), at least one RMO representing a relationship between a TX associated with a corresponding transaction manager and at least one resource that participates in the transaction (Resource Manager Object 108) and APIs to implement operations on a

Art Unit: 2194

kernel enlistment (EN) object (figure 4C "...ITransactionEnlistAsync interface and an IPrepareInfo interface..." Col. 16 Ln. 54 – 67), at least one EN representing a relationship between a resource manager and the transaction (Enlistment Object 80).

4. As to claim 2, Schaefer teaches interfaces according to claim 1, wherein each of the APIs to implement operations on TX, RMO, and EN utilize a handle to refer to an object ("...pointer..." Col. 15 Ln. 20 – 33, Col. 22 Ln. 45 – 51).

5. As to claim 3, Schaefer teaches interfaces according to claim 2, wherein each of the handles is an opaque reference to a unique object ("...pointer..." Col. 15 Ln. 20 – 33).

6. As to claim 5, Schaefer teaches interfaces according to claim 2, wherein at least one API calls for TX to transmit a prepare request to resource managers enlisted in a transaction ("...PrepareRequest..." Col. 16 Ln. 64 – 67).

7. As to claim 6, Schaefer teaches interfaces according to claim 2, wherein at least one API calls for a new TX to be created for a transaction ("...creates..." Col. 15 Ln. 15 – 20).

8. As to claim 7, Schaefer teaches interfaces according to claim 2, wherein at least one API calls for an existing TX to be opened for a transaction (“...tpconnect...” Col. 12 Ln. 63 – 67, Col. 13 Ln. 11 – 19, Col. 14 Ln. 59 – 67, Col. 25 Ln. 40 – 59).

9. As to claim 8, Schaefer teaches interfaces according to claim 2, wherein at least one API calls for TX to commit a transaction (“...CommitRequest...” Col. 16 Ln. 18 – 42).

10. As to claim 9, Schaefer teaches interfaces according to claim 2, wherein at least one API calls for TX to abort a transaction (“...AbortRequest...” Col. 16 Ln. 18 – 42).

11. As to claim 10, Schaefer teaches interfaces according to claim 2, wherein at least one API calls for TX to save a current state of the transaction (“...commit...” Col. 13 Ln. 1 – 10, Col. 14 Ln. 35 – 40).

12. As to claim 11, Schaefer teaches interfaces according to claim 2, wherein at least one API calls for TX to retrieve information about the TX for a requestor (“...GetTransactionInfo method...” Col. 15 Ln. 28 – 31).

13. As to claim 12, Schaefer teaches interfaces according to claim 2, wherein at least one API calls for TX to set information (“...SetComplete() method...” Col. 25 Ln. 46 – 50).

14. As to claim 14, Schaefer teaches interfaces according to claim 2, wherein at least one API is: PreprepareEnlistment, PrepareEnlistment, OpenEnlistment, CreateTransaction, OpenTransaction, CommitTransaction, RollbackTransaction, SavepointTransaction, GetTransactionInfo, and SetTransactionInfo ("...GetTransactionInfo method..." Col. 15 Ln. 28 – 31).

15. As to claim 15, Schaefer teaches interfaces according to claim 2, wherein at least one API calls for a new RMO to be created ("...created..." Col. 15 Ln. 8 – 17).

16. As to claim 18, Schaefer teaches interfaces according to claim 2, wherein at least one API calls for an existing RMO to open for a transaction ("...tpconnect..." Col. 12 Ln. 63 – 67, Col. 13 Ln. 11 – 19, Col. 14 Ln. 59 – 67, Col. 25 Ln. 40 – 59).

17. As to claim 21, Schaefer teaches interfaces according to claim 2, wherein at least one API calls for RMO to set information ("...Enlist method...Reenlist method..." Col. 15 Ln. 51 – 62).

18. As to claim 22, Schaefer teaches interfaces according to claim 2, wherein at least one API calls for RMO to be enlisted on a transaction at least once ("...Enlist method..." Col. 15 Ln. 51 – 62, Col. 16 Ln. 8 – 17).

Art Unit: 2194

19. As to claim 23, Schaefer teaches interfaces according to claim 2, wherein at least one API calls for a notification from a resource manager for RMO

("...ReenlistmentComplete method..." Col. 15 Ln. 51 – 62).

20. As to claim 24, Schaefer teaches interfaces according to claim 2, wherein at least one API is: CreateResourceManager, OpenResourceManager,

DestroyResourceManager, GetResourceManagerInfo, SetResourceManagerInfo,

CreateEnlistment, and GetNotificationResourceManager ("...created..." Col. 16 Ln. 8 – 10).

21. As to claim 25, Schaefer teaches interfaces according to claim 2, wherein at least one API is to implement operations on TX by RMO ("...IResourceManager interface..."

Col. 15 Ln. 51 – 62).

22. As to claim 27, Schaefer teaches interfaces according to claim 25, wherein the at least one API is to inform TX that transaction preparation has been completed by a

requested resource manager ("...PrepareRequestDone..." Col. 16 Ln. 16 Ln. 60 – 67).

23. As to claim 28, Schaefer teaches interfaces according to claim 25, wherein the at least one API is to inform TX that a resource manager has completed rolling back a

transaction ("...AbortRequestDone..." Col. 17 Ln. 1 – 6, Col. 18 Ln. 21 – 25).

Art Unit: 2194

24. As to claim 29, Schaefer teaches interfaces according to claim 25, wherein the at least one API is to inform TX that a resource manager has committed to a transaction (“...CommitRequestDone method...” Col. 17 Ln. 1 – 3).

25. As claim 30, Schaefer teaches interfaces according to claim 25, wherein the at least one API is: PrePrepareComplete, PrepareComplete, RollbackComplete, and CommitComplete (“...PrepareRequest...” Col. 16 Ln. 60 – 67, “...CommitRequestDone method...” Col. 17 Ln. 1 – 3).

26. As to claim 31, Schaefer teaches interfaces according to claim 2, wherein least one API calls for a resource manager to be registered as a communications resource manager for a particular protocol (Resource Manager 70 Col. 13 Ln. 21 – 28, Col. 15 Ln. 4 – 8).

27. As to claim 32, Schaefer teaches interfaces according to claim 2, wherein at least one API calls for a representation of a transaction to be serialized into a buffer (“...encoding and decoding...” Col. 14 Ln. 50 – 54).

28. As to claim 33, Schaefer teaches interfaces according to claim 2, wherein at least one API calls for information representing registered protocols to be serialized into a buffer (“...encoding and decoding...” Col. 14 Ln. 50 – 54).

29. As to claim 34, Schaefer teaches interfaces according to claim 32, wherein at least one API calls for a transaction represented by the serialization be made available by a transaction management object (“...encoding and decoding...” Col. 14 Ln. 50 – 54).

30. As to claim 35, Schaefer teaches interfaces according to claim 2, wherein at least one API calls for a transaction to be propagated to a destination using push-style propagation (“...propagate information...” Col. 15 Ln. 63 – 67).

31. As to claim 36, Schaefer teaches interfaces according to claim 35, wherein at least one API calls for the output of the API calls for the transaction to be propagated to a destination using push-style propagation to be retrieved (“...propagate...” Col. 27 Ln. 64 – 67).

32. As to claim 37, Schaefer teaches interfaces according to claim 31, wherein at least one API is called when transaction propagation has been completed (“...CommitRequestDone method...” Col. 17 Ln. 1 – 3, “...Commit Complete Indication...” Col. 18 Ln. 16 – 20, “...hptpx_commit_complete...” Col. 31 Ln. 20 – 35).

33. As to claim 38, Schaefer teaches interfaces according to claim 31, wherein at least one API is called when requested transaction propagation has failed (“...AbortRequest method...” Col. 18 Ln. 7 – 25).

34. As to claim 39, Schaefer teaches interfaces according to claim 2, wherein at least one API is: RegisterProtocolAddressInformation, MarshallTransaction, GetProtocolAddressInformation, PullTransaction, PushTransaction, PushTransactionBuffer, PropagationComplete, and PropagationFailed (“...CommitRequestDone method...” Col. 17 Ln. 1 – 3, “...Commit Complete Indication...” Col. 18 Ln. 16 – 20, “...hptpx_commit_complete...” Col. 31 Ln. 20 – 35).

35. As to claim 40, Schaefer teaches an apparatus for implementing a transaction, comprising: a kernel transaction object (TX) to represent a transaction and being accessible to at least one process participating in the transaction (Transaction Object 78 Col. 15 Ln. 15 – 33); a kernel resource manager object (RMO) to represent a relationship between a TX associated with a corresponding transaction manager and at least one resource that participates in the transaction (Resource Manager Object 108 Col. 15 Ln. 51 – 62, Col. 16 Ln. 8 – 17); and a kernel enlistment object (EN) to represent a relationship between a resource manager and the transaction (Enlistment Object 80 Col. 16 LN. 54 – 67), wherein two-phase commit processing is executed by calling APIs on the TX, the RMO, and the EN (“...ITransaction interface...” Col. 15 Ln. 27 – 33, IResourceManagerFactory interface...” Col. 15 Ln. 42 – 62, “...ITransactionEnlistmentAsync interface...” Col. 16 Ln. 54 – 67).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

36. Claims 4,16,17,20 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 6,157,927 to Schaefer et al., in view of U.S. Pat. No. 6,728,958 B1 to Klein et al.

37. As to claim 4, Schaefer is silent with reference to interfaces according to claim 2, wherein at least one API calls for TX to transmit pre-prepare messages to resource managers associated with a transaction.

Klein teaches to interfaces according to claim 2, wherein at least one API calls for TX to transmit pre-prepare messages to resource managers associated with a transaction ("...pre-prepare notification..." Col. 2 Ln. 19 – 23, Ln. 40 – 44, Ln. 57 – 67, Col. 7 Ln. 37 – 39).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Schaefer with the teaching of Klein because the teaching of Klein would improve the system of Schaefer by providing resource managers with extra "pre-prepare" processing prior to the commencement of commitment processing and supporting porting a foreign database system on the local platform by writing to a file system (Klein Col. 7 Ln. 24 – 30).

38. As to claim 16, Klein teaches interfaces according to claim 15, wherein the new RMO is volatile (“...volatile resource manager (VRM) Col. 6 Ln. 63 – 67, Col. 7 Ln. 1 - 2).

39. As to claim 17, Klein teaches interfaces according to claim 15, wherein the new RMO is durable (“...recoverable resource manager...” Col. 6 Ln. 63 – 67).

40. As to claim 20, Klein teaches interfaces according to claim 2, wherein at least one API calls for RMO to transmit information regarding RMO to a requestor (Col. 7 Ln. 1 – 23).

41. As to claim 26, Klein teaches interfaces according to claim 25, wherein the at least one API is to inform TX that pre-preparing is complete (“...ready signal...” Col. 8 Ln. 33 – 41).

42. Claims 13 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 6,157,927 to Schaefer et al., in view of U.S. Pat. No. 6,101,527 to Lejeune et al.

43. As to claim 13, Schaefer is silent with reference to interfaces according to claim 2, wherein at least one API calls for TX to close.

Lejeune teaches interfaces according to claim 2, wherein at least one API calls for TX to close (“...xa_close...” Col. 5 Ln. 40 – 42).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Schaefer with the teaching of Lejeune because the teaching of Lejeune would improve the system of Schaefer by providing a process for allowing disconnection from a resource manager (Lejeune Col. 5 Ln. 41 – 42).

44. As to claim 19, Lejeune teaches interfaces according to claim 2, wherein at least one API calls for RMO to be destroyed (“...terminate...” Col. 16 Ln. 48 – 57).

Response to Arguments

Applicant's arguments with respect to claims 1-40 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Pub. No. 2003/0050972 A1 to Felt et al.: directed to transaction processing system.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles E. Anya whose telephone number is 571-272-3757. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Thomson can be reached on 571-272-3718. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

cea.


WILLIAM THOMSON
SUPERVISORY PATENT EXAMINER